

IN THE CLAIMS

Please cancel claims 2 thru 4, 6 thru 9, 12 thru 14 and 16 thru 27 without prejudice or disclaimer, amend claims 1, 5, 10, 11 and 15, and add claims 28 thru 37 as follows:

1 1. (Currently Amended) A ~~unified in-building~~ communication method in a
2 wireless in-building communication system connected to a public land mobile network, ~~a~~
3 ~~public switched telephone network/integrated services digital network, and an Internet~~
4 ~~protocol network~~ including a mobile switching center and a base station controller, said
5 method comprising the steps of:

6 forming a common cell area in which a wireless public communication service and
7 a wireless in-building communication service are available ~~in a prescribed local area~~
8 through a private base station;

9 ~~connecting a mobile switching center to said public land mobile network;~~

10 requesting a communication service at a mobile terminal in the common cell area;

11 determining, in response to the requesting of the communication service, whether
12 the mobile terminal is registered for the wireless in-building communication service;

13 providing ~~communications functions~~ the wireless in-building communication
14 service to a registered mobile terminal ~~when said registered mobile terminal is located in~~
15 ~~said common cell area~~; and

16 ~~not providing said communications functions to~~ bypassing the communication
17 service request of an unregistered mobile terminal, and bypassing said unregistered to the

18 public land mobile terminal network.

Claims 2-4. (Canceled)

1 5. (Currently Amended) The method of claim 1, ~~said communications functions~~
2 ~~including~~ wherein the communication service includes voice and data services.

Claims 6-9. (Canceled)

1 10. (Currently Amended) The method of claim 1, ~~outputting~~ wherein signals from
2 [[said]] the registered mobile terminal are outputted to at least one antenna mounted in
3 said common cell area, and said at least one antenna [[being]] is coupled to [[said]] the
4 wireless in-building communication system.

1 11. (Currently Amended) The method of claim 1, [[said]] wherein the registered
2 mobile terminal ~~communicating~~ communicates with one ~~selected from among~~ of a wire
3 extension terminal and a wireless extension terminal, and [[said]] the registered mobile
4 terminal wirelessly ~~receives~~ performs a data service through [[said]] an Internet protocol
5 network.

Claims 12-14. (Canceled)

1 15. (Currently Amended) A unified in-building communication apparatus
2 connected to a public land mobile network, ~~a public switched telephone~~
3 ~~network/integrated services digital network, and an Internet protocol network,~~ said
4 apparatus comprising:

5 ~~at least one in-building repeater~~ a private base station for forming a public/private
6 common cell area in which ~~[[said]]~~ a public land mobile network service and an in-
7 building ~~private~~ wireless network service are ~~commonly used~~ available;

8 a call manager ~~controlling a wireless call of a registered extension mobile terminal~~
9 ~~of said in-building private wireless network, controlling operation and maintenance of~~
10 ~~radio resources, controlling private base station controller resources, and controlling~~
11 ~~registration and function setup of extension mobile subscriber corresponding to said~~
12 ~~extension mobile terminal~~ responsive to a communication request from a mobile terminal
13 in the common cell area for determining whether an in-building wireless network of the
14 mobile terminal is registered, and controlling provision of a corresponding service
15 according to a result of the determination; and

16 a public/private communication service unit ~~being connected to said public land~~
17 ~~mobile network, said public switched telephone network/integrated services digital~~
18 ~~network, and said Internet protocol network, said public/private communication service~~
19 ~~unit performing an incoming/outgoing call from and to an office line and an extension~~
20 ~~call through an in-building private branch exchange, performing wireless communication~~
21 ~~of a registered mobile terminal in a base station under control of said call manager, and~~

22 ~~performing communication of an Internet protocol terminal~~ responsive to control by said
23 control manager for providing the in-building wireless network service to a registered
24 mobile terminal, and for controlling an unregistered mobile terminal for connection to the
25 public land mobile network.

Claims 16-27. (Canceled)

1 28. (New) The method of claim 1, wherein the wireless in-building
2 communication service provided to the registered mobile terminal includes a
3 communication service between the registered mobile terminal and a wire extension
4 terminal.

1 29. (New) The method of claim 1, wherein the wireless in-building
2 communication service provided to the registered mobile terminal includes a
3 communication service between the registered mobile terminal and a wireless extension
4 terminal.

1 30. (New) The method of claim 1, wherein the wireless in-building
2 communication system is connected to an Internet protocol network through a local area
3 network.

1 31. (New) The method of claim 30, wherein the wireless in-building
2 communication service provided to the registered mobile terminal includes a data
3 communication service between the registered mobile terminal and an Internet protocol
4 network.

1 32. (New) The apparatus of claim 15, wherein the public/private communication
2 service unit comprises:

3 an Internet protocol-private branch exchange for performing switching for
4 establishing communication between a mobile terminal in the common cell area and a
5 wire extension terminal, and for providing a path between a wireless extension terminal
6 and one of a public switched telephone network and an integrated service digital network;
7 and

8 a private base station controller for allocating a vocoder in response to a call
9 request of the mobile terminal in the common cell area, and for providing a
10 communication path to the mobile terminal in the common cell area.

1 33. (New) The apparatus of claim 32, further comprising:

2 a router for providing access between the unified in-building communication
3 apparatus and an Internet protocol network; and

4 a local area network switch connected to the unified in-building communication
5 apparatus through the router for switching data of the unified in-building communication

6 apparatus, and for connecting the unified in-building communication apparatus to the
7 Internet protocol network through a local area network.

1 34. (New) The apparatus of claim 33, further comprising a transcoder and
2 selector bank interface for providing an interface between the local area network switch
3 and the private base station controller.

1 35. (New) The apparatus of claim 34, wherein the private base station controller
2 is connected to a private base station and to the public land mobile network through
3 respective communication lines, and includes a local interface assembly for providing an
4 interface therebetween.

1 36. (New) The apparatus of claim 35, wherein the local interface assembly
2 generates and outputs inter-process communication data from communication data which
3 is received from the private base station and the public land mobile network, and outputs
4 communication data from inter-process communication data which is transmitted to the
5 private base station and the public land mobile network.

1 37. (New) The apparatus of claim 36, further comprising a high capacity inter-
2 process communication node board assembly connected to the local interface assembly,
3 the transcoder and selector bank interface, and the call manger, respectively, for

- 4 performing inter-process communication data processing between the local interface
5 assembly, the transcoder and selector bank interface, and the call manager.